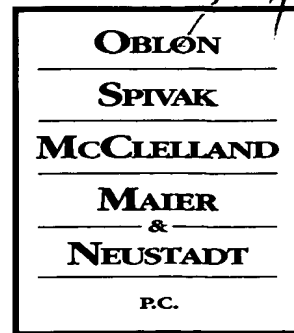




Docket No.: 213267US0PCT

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313



ATTORNEYS AT LAW

RE: Application Serial No.: 09/926,109
Applicants: James Arthur SMITH, et al.
Filing Date: September 4, 2001
For: PRODUCTION OF A TEXTILE FLOORCOVERING
HAVING MORE THAN ONE LAYER, USING AN
AQUEOUS POLYMER DISPERSION AS ADHESIVE
Group Art Unit: 1771
Examiner: JUSKA, C.A.

SIR:

Attached hereto for filing are the following papers:

Notice of Appeal; Appeal Brief with Appendices

Our credit card payment form in the amount of \$1,000.00 is attached covering any required fees. In the event any variance exists between the amount enclosed and the Patent Office charges for filing the above-noted documents, including any fees required under 37 C.F.R. 1.136 for any necessary Extension of Time to make the filing of the attached documents timely, please charge or credit the difference to our Deposit Account No. 15-0030. Further, if these papers are not considered timely filed, then a petition is hereby made under 37 C.F.R. 1.136 for the necessary extension of time. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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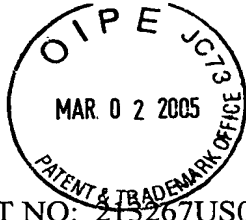
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DOCKET NO: 213267US0PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :
JAMES ARTHUR SMITH, ET AL. : EXAMINER: JUSKA, C. A.
SERIAL NO: 09/926,109 :
FILED: SEPTEMBER 4, 2001 : GROUP ART UNIT: 1771
FOR: PRODUCTION OF A TEXTILE :
FLOORCOVERING HAVING MORE
THAN ONE LAYER, USING AN
AQUEOUS POLYMER DISPERSION AS
ADHESIVE

APPEAL BRIEF

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal of the Final Rejection dated January 14, 2005 of Claims 1-8 and 11-29. A Notice of Appeal is **submitted herewith**.

I. REAL PARTY IN INTEREST

The real party in interest in this appeal is BASF Aktiengesellschaft having an address 67056 Ludwigshafen, Germany.

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II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignee are aware of no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF THE CLAIMS

Claims 1-8 and 11-29, all the claims in the application, stand rejected and are herein appealed.

IV. STATUS OF THE AMENDMENTS

No amendment under 37 CFR 1.116 has been filed.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

As recited in independent Claim 1, the invention is a textile floorcovering having more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, wherein the textile floorcovering is a tufted carpet, and wherein one layer is a tufted backing fabric, and one layer is a secondary backing bonded to said tufted backing fabric by said adhesive.

See original Claims 1, 9 and 10, and the specification at page 1, lines 5-11 and the paragraph bridging pages 7 and 8.

As recited in independent Claim 13, the invention is also an aqueous adhesive comprising, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, and comprising a thickener, where the thickener is a copolymer of ethylenically unsaturated compounds at least 50% by weight of which are ethylenically unsaturated acids, ethylenically unsaturated amides or mixtures of these.

See original Claim 13 and the specification at page 6, last paragraph.

As recited in independent Claim 21, the invention is also a textile floorcovering having more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, wherein the proportion by weight of the polymer A) is less than 10% by weight, based on the total of A) and B).

See the specification at page 6, lines 19-24, and Adhesives 2 and 6 in Table 1 at page 9.

VI. GROUNDS OF REJECTION

(A) Claims 1-3, 7, 8, 11, 12, 14 and 15 stand rejected under 35 U.S.C. § 102(b) as anticipated by JP58-152037 (JP '037).

(B) Claims 1-3, 7, 8, 11, 12, 14, 15, 18 and 19 stand rejected under 35 U.S.C. § 102(b) as anticipated by JP58-041972 (JP '972).

(C) Claims 16, 17 and 22-26 stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '037 or JP '972.

(D) Claim 4 stands rejected under 35 U.S.C. § 103(a) as unpatentable over JP '037 or JP '972 in view of U.S. 6,162,848 (Lattime et al).

(E) Claims 5, 6, 13 and 27-29 stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '037 or JP '972 in view of U.S. 5,851,625 (Smesny et al).

(F) Claims 20 and 21 stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '972.

(G) Claims 13 and 27-29 stand rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. 5,403,884 (Perlinski) in view of Smesny et al.

(H) Claim 21 stands rejected under 35 U.S.C. § 103(a) as obvious over Perlinski.

VII. ARGUMENT

Introductory Preface for all Grounds of Rejection

The invention relates to textile floorcoverings composed of more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, as aqueous dispersion of a mixture made from a polymer A) at least 60% by weight of which is composed of ethylene and from a polymer B) at least 60 by weight of which is composed of vinylaromatics, dienes or mixtures of these, wherein the textile floorcovering is preferably a tufted carpet. Such carpets are traditionally made by bonding a tufted backing fabric with a

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secondary backing using an adhesive. Such adhesives have included styrene-butadiene copolymers. Such adhesives have also been used as a precoat in which pile material is tufted through the backing fabric, i.e., pulled and then fixed by applying a binder. The prior art adhesives have not been fully satisfactory.

As recited in Claim 1, the present invention is a textile floorcovering having more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, wherein the textile floorcovering is a tufted carpet, and wherein one layer is a tufted backing fabric, and one layer is a secondary backing bonded to said tufted backing fabric by said adhesive.

Additionally, as recited in Claim 13, the invention is an aqueous adhesive comprising, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, and comprising a thickener, where the thickener is a copolymer of ethylenically unsaturated compounds at least 50% by weight of which are ethylenically unsaturated acids, ethylenically unsaturated amides or mixtures of these.

As recited in Claim 21, the invention is also a textile floorcovering having more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is

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composed of vinylaromatics, dienes or mixtures of these, wherein the proportion by weight of the polymer A) is less than 10% by weight, based on the total of A) and B).

The claimed inventions also include a process for producing a textile floorcovering.

The specification contains comparative data between the presently-claimed invention, and prior art adhesives based on butadiene/styrene copolymer. Table 1 at pages 8-9 of the specification lists precoats and adhesives used in the comparative data, reproduced below:

Table 1:

| | Constituents | Parts by weight (dry) |
|------------|-----------------------|-----------------------|
| Precoat 1 | SN LD 611 | 100 |
| | Chalk W 12 | 500 |
| | Latekol D | 0.2 |
| | Solids content 78 % | |
| Precoat 2 | SN LD 791 | 100 |
| | Latekol D | 0.2 |
| Precoat 3 | SN LD 791 | 100 |
| | Chalk W 12 | 800 |
| | Latekol D | 0.2 |
| | Solids content 78 % | |
| Adhesive 1 | SN LD 611 | 100 |
| | Chalk W 12 | 250 |
| | Latekol D | 0.2 |
| | Solids content 78 % | |
| Adhesive 2 | SN LD 611 | 95 |
| | Poligen WE 3 | 5 |
| | Collacral HP | 1.0 |
| | Solids content 50 % | |
| Adhesive 3 | SN LD 611 | 90 |
| | Polygen W3 | 10 |
| | Collacral HP | 1 |
| | Solids content 47,5 % | |
| Adhesive 4 | SN LD 611 | 100 |
| | Chalk W 12 | 250 |
| | Latekol D | 0.2 |
| | Solids content 75 % | |

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| | | |
|------------|---------------------|-----|
| Adhesive 5 | SN LD 611 | 100 |
| | Latekol D | 0.2 |
| | Solids content 53 % | |
| Adhesive 6 | SN LD 611 | 95 |
| | Polygen W3 | 5 |
| | Latekol D | 1 |
| Adhesive 7 | SN LD 611 | 90 |
| | Polygen W3 | 10 |
| | Latekol D | 1 |

Meanings of terms:

SN LD 611: Styrofan® LD 611, butadiene/styrene copolymer, ethylene

Poligen® WE 3: ethylene/acrylic acid copolymer

Chalk W 12: Calcicol W 12 from Alpha Calcit

Collacral®: thickener, acrylic acid/acrylamide copolymer

Latekol® D: thickener, polyacrylic acid

Adhesives 1, 4 and 5 are for purposes of comparison, since they do not contain presently-recited polymer A). With preliminary application of one of the precoat, the strength of the bond between a precoat backing fabric and a secondary backing was determined, as described in the specification beginning at page 9, line 37. Using three different combinations of tufted backing fabric and secondary backing, wet and dry strength adhesive performance was evaluated, as shown in Tables 2-4, at pages 10-11 of the specification, reproduced below:

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Table 2:

Bond strength (5/32 wool fiber tufted into woven polypropylene (900 g/m²); secondary backing: polypropylene needlefelt, 375 g/m²)

| | Amount applied (dry) | | dry | | wet | |
|-------------------------|----------------------|----------|---------|---------|------|-------|
| | Precoat | Adhesive | F | F max | F | F max |
| Precoat 1, Adhesive 4*) | 650 | 800 | 39.2 | 54.9 | 22.3 | 27.1 |
| Precoat 1, Adhesive 2 | 650 | 230 | 44.6**) | 64.6**) | 33.1 | 37.9 |
| Precoat 1, Adhesive 2 | 650 | 180 | 72.9 | 83.0 | 50.4 | 35.5 |
| Precoat 1, Adhesive 3 | 650 | 230 | 45.6**) | 73.0**) | 43.4 | 53.2 |
| Precoat 1, Adhesive 3 | 650 | 180 | 63.2 | 78.2 | 38.4 | 45.9 |
| Precoat 2, Adhesive 2 | 100 | 230 | 46.4**) | 64.9**) | 42.8 | 53.6 |
| Precoat 1, Adhesive 5*) | 650 | 230 | 42.1 | 53.1 | - | - |
| Precoat 1 Adhesive 7 | 650 | 230 | 41.9**) | 65.5**) | 44.2 | 52.5 |

*) for comparison

**) tufted threads were pulled out of the backing fabric

Table 3:

Bond strength (1/8 polyamide fiber tufted into woven polypropylene (625 g/m²); secondary backing: polypropylene needlefelt (375 g/m²))

| | Amount applied (dry) | | dry | | wet | |
|-----------------------|----------------------|----------|-------|-------|------|-------|
| | Precoat | Adhesive | F | F max | F | F max |
| Precoat 1, Adhesive 2 | 650 | 230 | 63.0 | 68.1 | 28.9 | 34.9 |
| Precoat 2, Adhesive 2 | 100 | 230 | 100.1 | 107.7 | 33.5 | 39.9 |

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Table 4:

Bond strength (5/32 polypropylene fiber tufted into polypropylene (650 g/m²); secondary backing: polypropylene needlefelt (330 g/m²))

| | Amount applied (dry) | | dry | | wet | |
|-------------------------|----------------------|----------|------|-------|------|-------|
| | Precoat | Adhesive | F | F max | F | F max |
| Precoat 3, Adhesive 4*) | 780 | 550 | 10.7 | 16.3 | 6.4 | 7.7 |
| Precoat 3, Adhesive 2 | 780 | 160 | 34.0 | 40.8 | 21.6 | 26.3 |
| Precoat 2, Adhesive 2 | 90 | 160 | 24.1 | 27.7 | 10.9 | 12.7 |

As shown therein, the prior art adhesives were generally inferior to the adhesive of the presently-claimed invention.

The above-discussed results could not have been predicted by the above-applied prior art.

Ground (A)

Claims 1-3, 7, 8, 11, 12, 14 and 15 stand rejected under 35 U.S.C. § 102(b) as anticipated by JP58-152037 (JP '037). That rejection is untenable and should not be sustained.

According to the English abstract thereof, JP '037 discloses a fireproof backing composition for carpeting comprising the combination of a fire-retarding plasticizer and a polymer composition, which polymer composition consists of 40-95 wt% of an emulsion of vinyl chloride-ethylene (III) or vinyl chloride-vinyl acetate-ethylene copolymer (IV) or their modified material (V), and 5-60% of a synthetic rubber latex (VI), which synthetic rubber latex may be a butadiene copolymer such as styrene-butadiene, acrylonitrile-butadiene, or

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methyl methacrylate-butadiene. JP '037 further discloses that the weight ratio of vinyl chloride to ethylene to vinyl acetate in (presumably) components (III) and (IV) is 30-95:5-70:55-0. The Examiner also relies on an English translation of the full text of JP '037 prepared by the PTO, as allegedly disclosing the presently-claimed textile floor covering.

In reply, it appears that the composition of JP '037 is analogous to the presently-disclosed precoat, which precoat is used to fix the tufted threads in the backing fabric, as described in the specification herein in the paragraph bridging pages 7 and 8. Indeed, the English translation at the third paragraph of page 10 discloses that "piles are strongly fixed in the laying article treated with the flame-retardant packing [sic] composition of the present invention, and the adhesion with a secondary processing material is also good." The Examiner appears to assume that the term "the adhesion with a secondary processing material is also good" means that the composition of JP '037 is used as is the present composition, i.e., to bond a tufted backing fabric with a secondary backing. However, since JP '037 discloses drying their composition prior to affixing any secondary backing, JP '037 can also be interpreted as their composition allowing for the use of a subsequent, and not defined, adhesive being used to bond with a secondary backing.

In the Final Rejection, in response to the above argument that JP '037 does not disclose the presently-recited adhesive for bonding the presently-recited tufted backing fabric to the presently-recited secondary backing, the Examiner points to page 3, lines 8-20 of the English translation of JP '037. In reply, this passage supports Appellants' argument above that JP '037 appears to be analogous to the presently-disclosed precoat.

As further evidence in support of Appellants' interpretation, JP '037 discloses that a tackifier can be added to their composition (page 9, lines 1-3 of the English translation). If the fireproof backing composition of JP '037 is intended to be an adhesive *per se*, why would it be necessary to disclose that a tackifier may be added?

At best, the Examiner must speculate as to the actual disclosure of JP '037. Clearly, since the statute is couched in such terms that "a person shall be entitled to a patent unless . . .," the burden is on the Examiner to demonstrate that the reference is accurately interpreted as anticipatory; the burden is not on Appellants to demonstrate that it is not.

Claim 11

Claim 11 is separately patentable, because JP '037 neither discloses nor suggests a process for producing a textile floorcovering as claimed in claim 1, which comprises applying from 20 g to 1000 g (dry) per m² of adhesive to one of the layers and adhesively bonding the layers to one another. Since JP '037 does not disclose an adhesive, it obviously does not disclose or suggest the amounts recited in Claim 11.

Claim 12

Claim 12 is separately patentable, because JP '037 neither discloses nor suggests a process for producing a textile floorcovering as claimed in claim 11, wherein the adhesive is applied to the reverse side of the tufted backing fabric and the tufted backing fabric is adhesively bonded to the secondary backing. Since JP '037 does not disclose an adhesive, it necessarily does not disclose or suggest how an adhesive would be applied.

Ground (B)

Claims 1-3, 7, 8, 11, 12, 14, 15, 18 and 19 stand rejected under 35 U.S.C. § 102(b) as anticipated by JP58-041972 (JP '972). That rejection is untenable and should not be sustained.

According to the English abstract thereof, JP '972 discloses a fireproof backing composition for carpeting comprising the combination of a polymer composition containing 90-10 wt% of an emulsion of vinyl chloride-ethylene or vinyl chloride-vinyl acetate-ethylene copolymer, or modified by a functional monomer, such as acrylic acid, and 10-90% of a synthetic rubber latex, which may be a butadiene copolymer such as styrene-butadiene, acrylonitrile-butadiene, or methyl methacrylate-butadiene. JP '972 further discloses that the weight ratio of vinyl chloride to ethylene to vinyl acetate is (presumably) 30-95:5-70:55-0, and that the composition optionally contains a thickening agent and flame-retarding agent. The Examiner also relies on an English translation of the full text of JP '972 prepared by the PTO, as allegedly disclosing the presently-claimed textile floor covering.

In reply, it appears that the composition of JP '972 is analogous to the presently-disclosed precoat, which precoat is used to fix the tufted threads in the backing fabric, as described in the specification herein in the paragraph bridging pages 7 and 8. Indeed, the English translation at the third paragraph of page 9 discloses that "piles are strongly fixed in the laying article treated with the flame-retardant packing [sic] composition of the present invention, and the adhesion with a secondary processing material is also good." The Examiner appears to assume that the term "the adhesion with a secondary processing material

is also good" means that the composition of JP '972 is used as is the present composition, i.e., to bond a tufted backing fabric with a secondary backing. However, since JP '972 discloses drying their composition prior to affixing any secondary backing, JP '972 can also be interpreted as their composition allowing for the use of a subsequent, and not defined, adhesive being used to bond with a secondary backing. Indeed, the English translation at page 9, second paragraph, exemplifies secondary processing as "a woven hemp fabric is adhered in a superposed fashion after spreading the composition, or after drying, a film is formed by melting a thermoplastic synthetic resin such as polyethylene," thereby suggesting that a thermoplastic resin such as ethylene performs the function of the presently-recited adhesive.

In the Final Rejection, in response to the above argument that JP '072 does not disclose the presently-recited adhesive for bonding the presently-recited tufted backing fabric to the presently-recited secondary backing, the Examiner points to page 3, lines 4-16 of the English translation of JP '072. In reply, this passage supports Appellants' argument above that JP '072 appears to be analogous to the presently-disclosed precoat.

The Examiner finds that Appellants have "misread" and "seems to completely ignore" that part of page 9 of the English translation of Sumitomo '972 which discusses a woven secondary backing. The Examiner finds that this discussion in Sumitomo '972 "clearly teaches an embodiment wherein a woven hemp secondary backing is bonded to primary backing by way of the adhesive backcoat (i.e., inventive composition) before drying said backcoat."

In reply, Appellants disagree that JP '972 discloses or suggests adhering a woven hemp fabric without the presence of a film formed by melting a thermoplastic synthetic resin such as polyethylene.

As further evidence in support of Appellants' interpretation, JP '072 discloses that a tackifier can be added to their composition (page 7, lines 18-19 of the English translation). If the fireproof backing composition of JP '072 is intended to be an adhesive *per se*, why would it be necessary to disclose that a tackifier may be added?

At best, the Examiner must speculate as to the actual disclosure of JP '072. Clearly, since the statute is couched in such terms that "a person shall be entitled to a patent unless . . .," the burden is on the Examiner to demonstrate that the reference is accurately interpreted as anticipatory; the burden is not on Appellants to demonstrate that it is not.

Claim 11

Claim 11 is separately patentable, because JP '972 neither discloses nor suggests a process for producing a textile floorcovering as claimed in claim 1, which comprises applying from 20 g to 1000 g (dry) per m² of adhesive to one of the layers and adhesively bonding the layers to one another. Since JP '972 does not disclose an adhesive, it obviously does not disclose or suggest the amounts recited in Claim 11.

Claim 12

Claim 12 is separately patentable, because JP '972 neither discloses nor suggests a process for producing a textile floorcovering as claimed in claim 11, wherein the adhesive is

applied to the reverse side of the tufted backing fabric and the tufted backing fabric is adhesively bonded to the secondary backing. Since JP '972 does not disclose an adhesive, it necessarily does not disclose or suggest how an adhesive would be applied.

Ground (C)

Claims 16, 17 and 22-26 stand rejected under 35 U.S.C. § 103(a) as unpatentable over JP '037 or JP '972. That rejection is untenable and should not be sustained.

JP '037 and JP '972, and their deficiencies, have been discussed under Grounds (A) and (B), *supra*, respectively. For reasons stated therein, they do not suggest the presently-claimed subject matter.

Claim 22

Claim 22 is separately patentable, since a polymer comprising from 70 to 99.5 % by weight of ethylene and from 0.5 to 30 % by weight of an ethylenically unsaturated acid cannot result in JP '037 or JP '972, which each disclose that it is especially important that their copolymer (A) contain 30-95% vinyl chloride.

Claim 23

Claim 23 is separately patentable, since a polymer comprising from 70 to 95 % by weight of ethylene and from 5 to 30 % by weight of an ethylenically unsaturated acid cannot result in JP '037 or JP '972, which discloses that it is especially important that their copolymer (A) contain 30-95% vinyl chloride.

Claim 25

Claim 25 is separately patentable, since the relative amounts of polymer A) (less than 10 % maximum) and polymer B) are outside the scope of both JP '037, which requires their ethylene-containing polymer to be present in a minimum amount of 40 wt%, and JP '972, which requires their ethylene-containing polymer to be present in a minimum amount of 10 wt%.

Claim 26

Claim 26 is separately patentable, since the relative amounts of polymer A) (5 % maximum) and polymer B) are outside the scope of both JP '037, which requires their ethylene-containing polymer to be present in a minimum amount of 40 wt%, and JP '972, which requires their ethylene-containing polymer to be present in a minimum amount of 10 wt%.

Ground (D)

Claim 4 stands rejected under 35 U.S.C. §103(a) as unpatentable over JP '037 or JP '972 in view of Lattime et al. That rejection is untenable and should not be sustained.

Even if a styrene-butadiene rubber of JP '037 or JP '972 were carboxylated, as disclosed by Lattime et al., the result would still not be the presently-claimed invention.

Ground (E)

Claims 5, 6, 13 and 27-29 stand rejected under 35 U.S.C. §103(a) as unpatentable over JP '037 or JP '972 in view of Smesny et al. That rejection is untenable and should not be sustained.

Smesny et al discloses an adhesive composition containing, *inter alia*, a thickener. JP '037 and JP '972, on the other hand, disclose a fireproof backing composition for carpeting. Without the present disclosure as a guide, it is not clear why one skilled in the art would add an adhesive thickener to the fireproof backing composition of JP '037 or JP '972. Nevertheless, even if a thickener, as disclosed by Smesny et al, were added to the carpet backing composition of JP '037 or JP '972, the result would not be the presently-claimed invention.

Claim 27

Claim 27 is separately patentable, since a polymer comprising from 70 to 99.5 % by weight of ethylene and from 0.5 to 30 % by weight of an ethylenically unsaturated acid

cannot result in combining Smesny et al with JP '037 or JP' 972, which each disclose that it is especially important that their copolymer (A) contain 30-95% vinyl chloride.

Claim 28

Claim 28 is separately patentable, since a polymer comprising from 70 to 95 % by weight of ethylene and from 5 to 30 % by weight of an ethylenically unsaturated acid cannot result in combining Smesny et al with JP '037 or JP' 972, which each discloses that it is especially important that their copolymer (A) contain 30-95% vinyl chloride.

Claim 29

Claim 29 is separately patentable, since the relative amounts of polymer A) (5 % maximum) and polymer B) are outside the scope of both JP '037, which requires their ethylene-containing polymer to be present in a minimum amount of 40 wt%, and JP '972, which requires their ethylene-containing polymer to be present in a minimum amount of 10 wt%.

Ground (F)

Claims 20 and 21 stand rejected under 35 U.S.C. §103(a) as unpatentable over JP '972. That rejection is untenable and should not be sustained.

Claims 20 and 21 require that the mixture comprise the polymer A) in an amount of less than 10% by weight, based on the total of A) and B). JP '972 requires a minimum concentration of 10% by weight for their ethylene-containing copolymer. In addition, JP '972

discloses that if their ethylene-containing copolymer is present in an amount of less than 10 parts by weight (10 weight %), flame retardation is insufficient (sentence bridging pages 6 and 7 of English translation). Without the present disclosure as a guide, it would not have been obvious to lower the concentration to less than 10% by weight in JP '972. Even if lowered, the result would not be the presently-claimed invention, because JP '972 neither discloses nor suggests a textile floor covering of the type claimed herein.

Ground (G)

Claims 13 and 27-29 stand rejected under 35 U.S.C. §103(a) as unpatentable over Perlinski in view of Smesny et al. That rejection is untenable and should not be sustained.

Perlinski discloses a process for flocking cured or uncured elastomeric substrates comprising the steps of applying to the substrate an aqueous adhesive comprising 10 to 100% of an alkaline dispersion of an ethylene carboxylic acid copolymer and 0 to 90% of an aqueous elastomeric dispersion; electrostatically applying flocking fibers thereto, and drying the thus-flocked substrate (column 1, lines 52-58). The ethylene carboxylic acid copolymer is preferably present in an amount of 50 to 70% by weight (dry) of the flocking adhesive composition. The aqueous elastomeric dispersion may be, for example, carboxylated styrene-butadiene (column 5, lines 1-5). In the exemplified adhesives of Perlinski which contain such a carboxylated styrene-butadiene (adhesives A and D), the amount of ethylene carboxylic acid copolymer, i.e., ethylene-acrylic acid copolymer, is approximately 73% by weight of the total amount of said copolymer and the carboxylated styrene-butadiene [$240 \div (240 + 85)$].

Perlinski discloses additionally that "viscosity improvers such as fumed silica, etc." can be added (column 6, lines 11-14).

Smesny et al does not remedy the above-discussed deficiencies of Perlinski. Even if a thickener, as disclosed by Smesny et al, were added to the aqueous adhesive of Perlinski, the result would still not be the presently-claimed invention.

Nevertheless, without the present disclosure as a guide, there would have been no reason for one skilled in the art to choose the thickener disclosed by Smesny et al, out of all known thickeners, to the aqueous adhesive of Perlinski.

Claim 29

Claim 29 is separately patentable, since the relative amounts of polymer A) (5 % maximum) and polymer B) are outside the scope of Perlinski, which requires his ethylene-containing polymer to be present in a minimum amount of 10 wt%.

Ground (H)

Claim 21 stands rejected under 35 U.S.C. §103(a) as obvious over Perlinski. That rejection is untenable and should not be sustained.

Perlinski neither discloses nor otherwise suggests the presently-claimed invention of Claim 21, since the amount of polymer A) is outside the respective amount disclosed in Perlinski.

The Examiner finds that since Perlinski discloses a minimum amount of 10%, then it would be obvious to employ an amount less than 10%, such as 9%, since it has been held that

discovering an optimum value of a result-effective variable requires only routine skill in the art.

In reply, the Examiner's argument might have some weight if Applicants were asserting that they have found an optimum percentage between the 10-100% range in Perlinski. However, Claim 21 is outside this range. It is clearly not obvious to optimize a variable outside the range in the reference. Moreover, Perlinski discloses a preferred range of 50-70%. Thus, Perlinski already directs a person skilled in the art that if optimization is to be further carried out, it would be within the 50-70% range. Thus, Perlinski actually directs persons skilled in the art away from 10%, let alone a percentage less than 10%. As stated in *In re Sebek*, 175 USPQ 93, 95 (CCPA 1972):

However, while it may ordinarily be the case that the determination of optimum values for the parameters of a prior art process would be at least *prima facie* obvious, that conclusion depends upon what the prior art discloses with respect to those parameters. Where, as here, the prior art disclosure suggests the outer limits of the range of suitable values, and that the optimum resides within that range, and where there are indications elsewhere that in fact the optimum should be sought within that range, the determination of optimum values outside that range may not be obvious. We think it is not on the facts of this case.

In the Final Rejection, the Examiner cites M.P.E.P. §2144.05 and cases cited therein as supporting the finding that it would have been obvious to optimize outside the broadest range disclosed by Perlinski. In reply, none of the precedent cited by the Examiner supports this position.

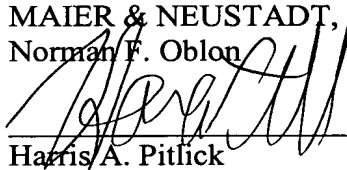
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VIII. CONCLUSION

For the above reasons, it is respectfully requested that all the rejections still pending in the Final Rejection be REVERSED.

Respectfully submitted,

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CLAIMS APPENDIX

1. A textile floorcovering having more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, wherein the textile floorcovering is a tufted carpet, and wherein one layer is a tufted backing fabric, and one layer is a secondary backing bonded to said tufted backing fabric by said adhesive.

2. A textile floorcovering as claimed in claim 1, wherein the proportion by weight of the polymer A) is from 0.1 to 50% by weight and that of B) is from 50 to 99.9% by weight, based on the total of A) and B).

3. A textile floorcovering as claimed in claim 1, wherein the structural components present in the polymer A) are from 60 to 99.9% by weight of ethylene and from 0.1 to 40% by weight of an ethylenically unsaturated acid, based on polymer A).

4. A textile floorcovering as claimed in claim 1 wherein the structural components present in the polymer B) are from 60 to 99.9% by weight of vinylaromatics, dienes or mixtures of these and from 0.1 to 20% by weight of an ethylenically unsaturated acid, based on polymer B).

5. A textile floorcovering as claimed in claim 1, wherein the adhesive also comprises a thickener.

6. A textile floorcovering as claimed in claim 5, wherein the thickener is a copolymer of ethylenically unsaturated compounds at least 50% by weight of which are ethylenically unsaturated acids, ethylenically unsaturated amides or mixtures of these.

7. A textile floorcovering as claimed in claim 1, wherein the adhesive comprises less than 200 parts by weight, based on 100 parts by weight of the total of A) and B), of a filler.

8. A textile floorcovering as claimed in claim 1, wherein no filler is present in the adhesive.

11. A process for producing a textile floorcovering as claimed in claim 1, which comprises applying from 20 g to 1000 g (dry) per m² of adhesive to one of the layers and adhesively bonding the layers to one another.

12. A process for producing a textile floorcovering as claimed in claim 11, wherein the adhesive is applied to the reverse side of the tufted backing fabric and the tufted backing fabric is adhesively bonded to the secondary backing.

13. An aqueous adhesive comprising, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, and comprising a thickener, where the thickener is a copolymer of ethylenically unsaturated compounds at least 50% by weight of which are ethylenically unsaturated acids, ethylenically unsaturated amides or mixtures of these.

14. A textile floorcovering as claimed in claim 1, wherein the tufted backing fabric comprises mainly a polypropylene or a polyester.

15. A textile floorcovering as claimed in claim 14, wherein the tufted backing fabric comprises threads fixed thereto on a side thereof that bonds to the secondary backing, wherein the threads are fixed to the tufted backing fabric with a binder comprising a styrene-butadiene copolymer.

16. A textile floorcovering as claimed in claim 1, wherein the secondary backing is a web made from woven or non-woven fibers, or is a needle felt, said secondary backing comprising a polyester or a polypropylene.

17. A textile floorcovering as claimed in claim 14, wherein the secondary backing is a web made from woven or non-woven fibers, or is a needle felt, said secondary backing comprising a polyester or a polypropylene.

18. A textile floorcovering as claimed in claim 2, wherein the proportion by weight of the polymer A) is from 0.5 to 20% by weight and that of B) is from 80 to 99.5% by weight, based on the total of A) and B).

19. A textile floorcovering as claimed in claim 18, wherein the proportion by weight of the polymer A) is from 1 to 10% by weight and that of B) is from 90 to 99% by weight, based on the total of A) and B).

20. A textile floorcovering as claimed in claim 19, wherein the proportion by weight of the polymer A) is less than 10% by weight, based on the total of the A) and B).

21. A textile floorcovering having more than one layer, wherein the layers have been bonded by an adhesive which comprises, as binder, an aqueous dispersion of a mixture made from a polymer A), at least 60% by weight of which is composed of ethylene and from a polymer B), at least 60% by weight of which is composed of vinylaromatics, dienes or mixtures of these, wherein the proportion by weight of the polymer A) is less than 10% by weight, based on the total of A) and B).

22. A textile floorcovering as claimed in claim 3, wherein polymer A comprises from 70 to 99.5 % by weight of ethylene and from 0.5 to 30 % by weight of an ethylenically unsaturated acid.

23. A textile floorcovering as claimed in claim 22, wherein polymer A comprises from 70 to 95 % by weight of ethylene and from 5 to 30 % by weight of an ethylenically unsaturated acid.

24. A textile floorcovering as claimed in claim 2, wherein the proportion by weight of the polymer A) is from 0.5 to 20% by weight and that of B) is from 80 to 99.5% by weight, based on the total of A) and B).

25. A textile floorcovering as claimed in claim 24, wherein the proportion by weight of the polymer A) is from 1 to less than 10% by weight and that of B) is from more than 90, to 99% by weight, based on the total of A) and B).

26. A textile floorcovering as claimed in claim 25, wherein the proportion by weight of the polymer A) is from 1 to 5% by weight and that of B) is from 95 to 99% by weight, based on the total of A) and B).

27. An aqueous adhesive as claimed in claim 13, wherein polymer A comprises from 70 to 99.5 % by weight of ethylene and from 0.5 to 30 % by weight of an ethylenically unsaturated acid.

28. An aqueous adhesive as claimed in claim 27, wherein polymer A comprises from 70 to 95 % by weight of ethylene and from 5 to 30 % by weight of an ethylenically unsaturated acid.

29. An aqueous adhesive as claimed in claim 13, wherein the proportion by weight of the polymer A) is from 1 to 5% by weight and that of B) is from 95 to 99% by weight, based on the total of A) and B).

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.